$costvar,\ c$
$termvar,\ x,\ y,\ z,\ f$
$baseAttackVar,\ b$
$index,\ i,\ j,\ k$

$$
\begin{array}{lll}
A,\ B,\ C,\ E & ::= & \\
 & | & b \\
 & | & A \odot B \\
 & | & A \sqcup B \\
 & | & A \rhd B \\
 & | & A \multimap B \\
 & | & A \circ\!\!-\!\!\circ B \\
 & | & (A)
\end{array}
$$

$$
\begin{array}{lll}
T & ::= & \\
 & | & b \\
 & | & T_1 \odot T_2 \\
 & | & T_1 \rhd T_2 \\
 & | & T_1 \sqcup T_2 \\
 & | & (T)
\end{array}
$$

$$
\begin{array}{lll}
\Gamma,\ \Delta,\ \Theta,\ \Psi & ::= & \\
 & | & \cdot \\
 & | & A \\
 & | & \Gamma, \Gamma'
\end{array}
$$

$\boxed{\Gamma; \Delta \vdash^T E}$

$$\frac{}{\cdot; b \vdash^T b}\ \text{T\_VAR}$$

$$\frac{}{b; \cdot \vdash^T b}\ \text{T\_VARC}$$

$$\frac{\Gamma_1; \Delta_1 \vdash^T T_1 \quad \Gamma_2; \Delta_2 \vdash^T T_2}{\Gamma_1, \Gamma_2; \Delta_1, \Delta_2 \vdash^T T_1 \odot T_2}\ \text{T\_PARA}$$

$$\frac{\Gamma_1; \Delta_1 \vdash^T T_1 \quad \Gamma_2; \Delta_2 \vdash^T T_2}{\Gamma_1, \Gamma_2; \Delta_1, \Delta_2 \vdash^T T_1 \rhd T_2}\ \text{T\_SEQ}$$

$$\frac{\Gamma_1; \Delta_1 \vdash^T T_1 \quad \Gamma_2; \Delta_2 \vdash^T T_2}{\Gamma_1, \Gamma_2; \Delta_1, \Delta_2 \vdash^T T_1 \sqcup T_2}\ \text{T\_CHOICE}$$

$\boxed{\Theta; \Psi \vdash E}$

$$\frac{}{\cdot; E \vdash E}\ \text{E\_VAR}$$

$$\frac{}{E; \cdot \vdash E}\ \text{E\_VARC}$$

$$\frac{\Theta_1; \Psi_1 \vdash E_1 \quad \Theta_2; \Psi_2 \vdash E_2}{\Theta_1, \Theta_2; \Psi_1, \Psi_2 \vdash E_1 \odot E_2}\ \text{E\_PARAI}$$

$$\frac{\Theta_1; \Psi_2 \vdash E_1 \odot E_2 \quad \Theta_2; \Psi_1, E_1, E_2, \Psi_3 \vdash E_3}{\Theta_1, \Theta_2; \Psi_1, \Psi_2, \Psi_3 \vdash E_3}\ \text{E\_PARAE}$$

$$\frac{\Theta_1; \Psi_1 \vdash E_1 \quad \Theta_2; \Psi_2 \vdash E_2}{\Theta_1, \Theta_2; \Psi_1, \Psi_2 \vdash E_1 \rhd E_2}\ \text{E\_SEQI}$$

$$\frac{\Theta_2; \Psi_2 \vdash E_1 \rhd E_2 \quad \Theta_1, E_1, E_2, \Theta_3; \Psi_2 \vdash E_3}{\Theta_1, \Theta_2, \Theta_3; \Psi_1, \Psi_2 \vdash E_3} \text{ E\_seqE}$$

$$\frac{\Theta; \Psi_1, E_1, E_2, \Psi_2 \vdash E}{\Theta; \Psi_1, E_2, E_1, \Psi_2 \vdash E} \text{ E\_ex}$$

$$\frac{\Theta_1; \Psi_1 \vdash E_1 \quad \Theta_2; \Psi_2 \vdash E_2}{\Theta_1, \Theta_2; \Psi_1, \Psi_2 \vdash E_1 \sqcup E_2} \text{ E\_choice}$$

$$\frac{\Theta; \Psi, E_1 \vdash E_2}{\Theta; \Psi \vdash E_1 \multimap E_2} \text{ E\_impI}$$

$$\frac{\Theta_1; \Psi_1 \vdash E_1 \multimap E_2 \quad \Theta_2; \Psi_2 \vdash E_1}{\Theta_1, \Theta_2; \Psi_1, \Psi_2 \vdash E_2} \text{ E\_impE}$$

$$\frac{\Theta_2; \Psi_1 \vdash E_1 \multimap E_2 \quad \Theta_1; \Psi_2 \vdash E_2 \multimap E_3}{\Theta_1, \Theta_2; \Psi_1, \Psi_2 \vdash E_1 \multimap E_3} \text{ E\_comp}$$

$$\frac{\Theta_1, \Theta_2; \Psi \vdash E \quad \Gamma; \Delta \vdash^T T}{\Theta_1, T, \Theta_2; \Psi \vdash E} \text{ E\_weakS}$$

$$\frac{\Theta; \Psi_1, \Psi_2 \vdash E \quad \Gamma; \Delta \vdash^T T}{\Theta; \Psi_1, T, \Psi_2 \vdash E} \text{ E\_weakP}$$

$$\frac{\cdot; \cdot \vdash T}{\cdot; \cdot \vdash (T \sqcup T) \circ\!\!-\!\!\circ T} \text{ E\_choiceCont}$$

$$\frac{\cdot; \cdot \vdash T_1 \sqcup T_2}{\cdot; \cdot \vdash (T_1 \sqcup T_2) \circ\!\!-\!\!\circ (T_2 \sqcup T_1)} \text{ E\_choiceSym}$$

$$\frac{\cdot; \cdot \vdash (T_1 \sqcup T_2) \sqcup T_3}{\cdot; \cdot \vdash ((T_1 \sqcup T_2) \sqcup T_3) \circ\!\!-\!\!\circ (T_1 \sqcup (T_2 \sqcup T_3))} \text{ E\_choiceAssoc}$$

$$\frac{\cdot; \cdot \vdash^T T_1 \odot (T_2 \rhd T_3)}{\cdot; \cdot \vdash (T_1 \odot (T_2 \sqcup T_3)) \circ\!\!-\!\!\circ ((T_1 \odot T_2) \sqcup (T_1 \odot T_3))} \text{ E\_distPara1}$$

$$\frac{\cdot; \cdot \vdash^T T_1 \rhd (T_2 \sqcup T_3)}{\cdot; \cdot \vdash (T_1 \rhd (T_2 \sqcup T_3)) \circ\!\!-\!\!\circ ((T_1 \rhd T_2) \sqcup (T_1 \rhd T_3))} \text{ E\_distSeq1}$$

$$\frac{\cdot; \cdot \vdash^T (T_2 \rhd T_3) \odot T_1}{\cdot; \cdot \vdash ((T_2 \sqcup T_3) \odot T_1) \circ\!\!-\!\!\circ ((T_2 \odot T_1) \sqcup (T_3 \odot T_1))} \text{ E\_distPara2}$$

$$\frac{\cdot; \cdot \vdash^T (T_2 \sqcup T_3) \rhd T_1}{\cdot; \cdot \vdash ((T_2 \sqcup T_3) \rhd T_1) \circ\!\!-\!\!\circ ((T_2 \rhd T_1) \sqcup (T_2 \rhd T_1))} \text{ E\_distSeq2}$$

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Definition rules:         25 good    0 bad
Definition rule clauses:  46 good    0 bad
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